Long Island Botanical Society

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Checklist of the Bryophytes of Long Island

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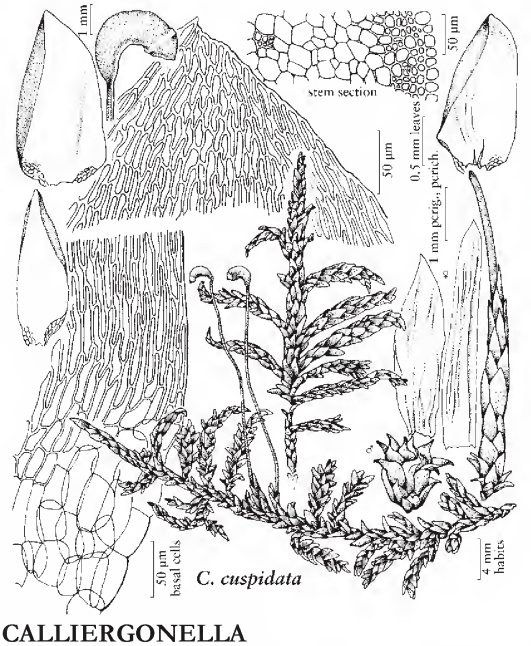
The bryophytes, commonly known as hornworts, liverworts and mosses, are non-flowering plants that are dispersed by spores as opposed to seeds, and can be found in a tremendous array of habitats, often with impressive diversity and abundance. While modern cladistics has separated the bryophytes into three groups, the Anthoceratophyta or hornworts, the Hepaticophyta or liverworts, and the Bryophyta or mosses, for the text of this paper the term bryophyte will be used in the broad sense.

With over 15,000 species worldwide, the bryophytes make up a sizeable portion of the approximately 300,000 land plants estimated to be living today. There are about 1,500 native vascular plants on Long Island, and the bryophytes may potentially have over 400 species, bringing the land plant total to nearly 2,000. In spite of their relatively small size, a requirement due to their lack of a developed vascular system, the bryophytes play a major role in our planet's ecology. For many years the bryophytes, like the lichens, have been used as indicators of environmental quality such as air quality (Pott & Turpin 1996; Davis et al. 2001). Even more impressive is the fact that there is more carbon stored in a single genus of moss, *Sphagnum*, than in any other genus of plants worldwide (Clymo & Hayward 1982).



CALLIERGONELLA

Courtesy of the Flora of North America Association, illustrator Patricia Eckel

The three main groups of bryophytes are relatively easy to distinguish from each other based upon characters visible with the naked eye or a hand lens. Hornworts are the least encountered of these groups as they tend to have quite specific habitat requirements. Our local hornworts tend to have a distinctly flattened thallus, often in irregular-shaped rosettes, usually with sporophytes present. These sporophytes, the spore bearing structures, resemble an animal horn, hence their common name. With only a handful of hornwort species in the region, an amateur bryologist can easily learn to recognize these plants.

Liverworts are a large group which can be separated from mosses by their absence of leaves, or if leaves are present, by the arrangement of those leaves. Leafy liverworts have leaves arranged in two or three rows, usually on creeping stems, while mosses have their leaves spirally arranged with few exceptions. Among leafy liverworts, the leaves are never found on the upper side of the stem, which usually gives the plants a flattened appearance. The leaves can be entire, lobed, ciliate or otherwise, just as in vascular plants. Many leafy liverworts can be recognized by what are known as complicate bilobed leaves in which the lobes are folded onto one another. Non-leafy or thalloid liverworts have a flattened rosette or strip-like plant body which is not divided into stems and leaves.

Mosses are also divided into subcategories. They are regarded as either pleurocarpous, with stems creeping or trailing and branches numerous, or acrocarpous with upright stems (sometimes inconspicuously so), and few to no branches. For the correct identification of mosses and liverworts, a proper understanding of these groups is essential.

For over a century, the more familiar and conspicuous vascular flora of Long Island has been well studied and documented through both local floristic studies and larger projects documenting entire families and their distributions across the island. The study of Long Island's bryophyte flora has been much less exhaustive. While several late 19th and early 20th century studies such as Jelliffe (1899) and Cain and Penfound (1938) included the documentation of bryophyte species, studies focused solely on bryophytes are nearly non-existent for the

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Long Island Botanical Society

Founded: 1986
Incorporated: 1989

The Long Island Botanical Society is dedicated to the promotion of field botany and a greater understanding of the plants that grow wild on Long Island, New York.

Visit the Society's Web site
www.libotanical.org

Society News

The Long Island Botanical Society was founded in 1986, and to celebrate our 25th Anniversary we are beginning to plan a 10-day botanical field trip to Florida in the Spring of 2011. LIBS member Ann Johnson has volunteered to serve as trip leader. We plan to start in the Florida panhandle and make our way into peninsular Florida. Stay tuned for more information.

LIBS has joined a coalition of 33 other organizations that formed to express opposition to the sale and development of a parcel of land owned by Suffolk County. The 250-acre parcel, which is within the Carmans River watershed, would be listed as surplus by the County which would then enter into a contract for the intensive development of this tract for mixed-use development known as "Legacy Village."

At LIBS' annual "Members Night" on December 8, 7 members gave presentations. Marion Hubbard offered a display on invasive plant species; Andy Greller shared slides of bee orchids in Greece; Peter Warny showed highlights of his trips in southeastern U.S. to Canada; Ray Welch produced "The Waning of the Season" with music; Marilyn Jordan showed the Florida panhandle spider lily (*Hymenocallis choctawensis*) which grows only in rocky marshes, and the water primrose which has invaded the Peconic River system in Forge Pond but which has been successfully weeded out by volunteers; Carol Johnston showed a few slides of grass-of-Parnassus and fringed gentian in southern Vermont, and shared her discovery of the rare (S1) stiff gentian (*Gentiana quinquefolia*) in a small quarry in North Pownal, Vermont; and Rich Kelly showed some eye-catching moths in Edgewood Preserve and elsewhere.

Long Island Flora Committee -- Update

After the untimely death of committee chair Steve Clemants in late 2008, the Flora Committee needed to regroup and push the Long Island Flora Atlas project towards completion.

To this end, the committee met on December 1st, 2009 at the Brooklyn Botanic Garden (BBG). The attendees were Gerry Moore, (the new chair of the Flora Committee), Barbara Conolly, Andy Greller, Rich Kelly, Eric Lamont, and Al Lindberg. The feasibility of continuing with the old process of manually placing specimen and sight record data on maps, by township/county, was discussed. Since BBG's New York Metropolitan Flora (NYMF) database apparently includes Long Island flora data that was input by Steve before his death, Gerry suggested that LIBS could use the NYMF data from Long Island for its atlas. This data is by 5-kilometer map blocks, so there would be much more information on any one species map. The numerous data points would almost approach a range map on Long Island. The NYMF database includes both specimen and sight record data. It was also discussed that a web-based atlas would be the best approach.

Steve Glenn of BBG will work with LIBS to get the project off the ground. A great amount of work will be needed to produce and arrange the species maps. It was suggested that LIBS hire a grad student to perform this work, which will be conducted at the BBG using a software site license owned by BBG. The LIBS executive board approved the expenditure of $3000, plus travel expenses, for this work.

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island, the one significant work having included the entire New York City region (Grout 1916).

The last few decades have seen occasional papers on the subject such as Biechele's (1993) work on the liverworts of eastern Suffolk County and a statewide checklist of mosses by Ketchledge (1980) which, due to a grid system for mapping the state, lumped species found in Staten Island with species from westernmost Long Island, and lumped central Long Island with portions of Westchester and Bronx Counties. Studies such as these can provide a base from which to begin future studies of the bryophytes of Long Island, however with the narrow habitat requirements of many species, smaller-scale studies and species lists of natural areas are currently needed for a proper assessment of bryophytes in our area. In the past few years several papers have begun to address this topic through local floras (Morgan & Sperling 2005), individual species distributions (Trigoboff 2005) and ecological assessments (Morgan & Sperling 2007).

Floristic works on Long Island bryophytes will become more important as ecological changes occur throughout the region. With the prospect of global climate change, bryophytes as well as vascular plants can provide indications as to the reality and extent of these changes. Slack (1977) points out that some coastal plain species range only as far north as Long Island and are not seen anywhere else in the Northeast, a pattern quite familiar to those studying vascular plant distributions. Species such as *Telaranea nematodes*, whose northernmost occurrence is in the Long Island region, can provide valuable data towards an understanding of climate change should the abundance of species such as this be altered over the coming years. It will be important to monitor the distribution of more northern species which occur sparingly on Long Island. For these reasons, documentation of these plants in individual parks and preserves on Long Island will become increasingly important over the next few years.

Aside from using particular species as ecological indicators, floristic change can be looked at on a larger scale in bryophytes to determine larger trends in a given area. In a study of Alley Pond and Cunningham Park, in Queens County, Long Island, the species richness, or total number of species present, dropped 36 percent for mosses, 58 percent for liverworts, and 50 percent for hornworts from the mid 1980s to the early part of this century (Morgan & Sperling 2007). These numbers provide strong evidence of a larger ecological shift in the area, although not necessarily negative. Could this shift be due to forest maturation, increased park traffic, lower rainfalls, higher temperatures or none of these? These are questions that will need to be examined further as more reliable species and distribution data are recorded for Long Island.

In the past, reports of bryophyte numbers for Long Island have been varied and incomplete (Table 1). This is due to several factors including a focus on particular smaller regions of Long Island such as Cold Spring Harbor (Cain 1936a), and eastern Suffolk County (Biechele 1993), or a focus upon vascular plants, with less emphasis upon the bryophytes (Jelliffe 1899). Other studies such as Grout (1916) and Ketchledge (1980), included Long Island as a part of a larger geographic area. Grout's work includes the bryophytes of much of New Jersey, Westchester County, and even the Delaware Water Gap, regions likely to have different floras than those of Long Island and likely to be major factors in his high number of taxa for the area. Within Ketchledge's work, the bryophytes that may have been found in southwesternmost Long Island are placed in with those of Staten Island, a separate entity with a very different vascular flora, and possibly bryophyte flora as well.

Table 1. Numbers of bryophyte taxa. Reports include all or parts of Long Island.

Source	Hornworts	Liverworts	Mosses
Biechele (1993)	3	70	NA
Cain (1936)	NA	11	23
Cain & Penfound (1938)	NA	28	48
Grout (1916)	NA	NA	370
Jelliffe (1899)	2	25	109
Ketchledge (1980)	NA	NA	289
Current study (2009)	4	78	226

In this contribution from the Long Island Botanical Society, the authors begin to provide data regarding the number of bryophytes found on Long Island, including both extant and historic species. This data is compiled from a variety of sources including published literature, herbarium records and field surveys. Several local herbaria including but not limited to the New York Botanical Garden (NY), Brooklyn Botanic Garden (BKL), Bartlett Arboretum (BART), and Queens College Biology Department (no official acronym) were searched both online and in person. Each of these herbaria holds significant collections of Long Island bryophytes ranging from hundreds to thousands of specimens collected on Long Island over the past 100-plus years. Field visits have been made from 2002 to the present and have resulted in approximately two thousand collections of bryophytes by the authors and coworkers on related projects. All specimens have been deposited at the Bartlett Arboretum Herbarium (BART) or the Queens College Biology Department.

Nomenclature for this checklist follows that of the USDA/NRCS, Plants National Database (2009), or the Flora of North America (2007) when family treatments are available. Field and laboratory identifications were done using a variety of guides including the Flora of North America (2007), Andrus (1980), Crum (1983) and Schuster (1949; 1953). This

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checklist includes a total of 68 families and 308 taxa, which can be broken down as follows; hornworts, 2 families and 4 species; liverworts, 26 families and 78 species; mosses, 40 families and 226 taxa. A full list of these taxa is included as Appendix 1.

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NOTE:
Membership renewals are due in January

Appendix 1. Checklist of the bryophytes of Long Island, New York

ANTHOCERATOPHYTA

ANTHOCEROTACEAE
Anthoceros macounii M. Howe
Anthoceros punctatus L.
Phaeoceros laevis (L.) Prosk.

NOTOTHYLADACEAE
Notothylas orbicularis (Schwein.) Sull.

HEPATICOPHYTA

ANEURACEAE
Aneura pinguis (L.) Dumort.
Riccardia latifrons (Lindb.) Lindb.
Riccardia multifida (L.) A. Gray
Riccardia palmata (Hedw.) Carruth.

AYTONIACEAE
Asterella tenella (L.) P. Beauv.

BLASIACEAE
Blasia pusilla L.

CALYPOGEIACEAE
Calypogeia fissa (L.) Raddi
Calypogeia muelleriana (Schiffn.) Müll. Frib.
Calypogeia sullivantii Austin

CEPHALOZIACEAE
Cephalozia bicuspidata (L.) Dumort.
Cephalozia catenulata (Huebener) Lindb.
Cephalozia connivens (Dicks.) Lindb.
Cephalozia lunulifolia (Dumort.) Dumort.
Cephalozia macrostachya Kaal.
Cephalozia pleniceps (Austin) Lindb.
Cladopodiella fluitans (Nees) H. Buch
Cladopodiella francisci
(Hook.) H. Buch ex Jörg.
Odontoschisma denudatum (Mart.) Dumort.
Odontoschisma prostratum (Sw.) Trevis.
Odontoschisma sphagni (Dicks.) Dumort.

CEPHALOZIELLACEAE
Cephaloziella divaricata (Sm.) Schiffn.
Cephaloziella hampeana (Nees) Schiffn.
Cephaloziella rubella (Nees) Warnst.
Nowellia curvifolia (Dicks.) Mitt.

CONOCEPHALACEAE
Conocephalum conicum (L.) Dumort.

FOSSOMBRONIACEAE
Fossombronia cristula Austin
Fossombronia foveolata Lindb.
Fossombronia wondraczekii (Corda) Dumort.

GEOCALYCACEAE
Chiloscyphus pallescens
(Ehrh. ex Hoffm.) Dumort.
Chiloscyphus polyanthos
(L.) Corda var. *rivularis* (Schrad.) Nees
Geocalyx graveolens (Schrad.) Nees
Harpanthus drummondii (Taylor) Grolle
Lophocolea heterophylla (Schrad.) Dumort.
Lophocolea minor Nees

GYMNOMITRIACEAE
Marsupella emarginata (Ehrh.) Dumort.
Marsupella sphacelata (Gieseke) Dumort.

JUBULACEAE
Frullania asagrayana Mont.
Frullania bolanderi Austin
Frullania eboracensis Gottsche
Jubula pensylvanica (Steph.) A. Evans

JUNGERMANNIACEAE
Barbilophozia barbata
(Schmidel ex Schreb.) Loeske
Gymnocolea inflata (Huds.) Dumort.
Jamesoniella autumnalis (DC.) Steph.
Jungermannia gracillima Sm.
Jungermannia leiantha Grolle
Jungermannia pumila With.
Lophozia bicrenata
(Schmidel ex Hoffm.) Dumort.
Lophozia capitata (Hook.) Macoun
Lophozia incisa (Schrad.) Dumort.
Mylia anomala (Hook.) A. Gray
Nardia insecta Lindb.

LEJEUNEACEAE
Lejeunea cavifolia
(Ehrh.) Lindb. emend. H. Buch

LEPIDOZIACEAE
Bazzania trilobata (L.) A. Gray
Kurzia pauciflora (Dicks.) Grolle
Kurzia setacea (Weber) Grolle
Kurzia sylvatica (A. Evans) Grolle
Lepidozia reptans (L.) Dumort.
Telaranea nematodes
(Gottsche ex Austin) M. Howe

LUNULARIACEAE
Lunularia cruciata (L.) Dumort.

MARCHANTIACEAE
Marchantia polymorpha L.
Preissia quadrata (Scop.) Nees

PALLAVICINIACEAE
Pallavicinia lyellii (Hook.) Carruth.

PELLIACEAE
Pellia epiphylla (L.) Corda
Pellia megaspora R.M. Schust.
Pellia neesiana (Gottsche) Limpr.

PLAGIOCHILACEAE
Plagiochila porelloides
(Torr. ex Nees) Lindenb.

PORELLACEAE
Porella pinnata L.
Porella platyphylla (L.) Pfeiff.

PSEUDOLEPICOLEACEAE
Blepharostoma trichophyllum (L.) Dumort.

PTILIDIACEAE
Ptilidium pulcherrimum (Weber) Vain.

RADULACEAE
Radula complanata (L.) Dumort.

RICCIACEAE
Riccia fluitans L.
Riccia huebeneriana Lindenb. ssp. *sullivantii*
(Austin) R.M. Schust.
Ricciocarpos natans (L.) Corda

SCAPANIACEAE
Diplophyllum apiculatum (A. Evans) Steph.
Scapania nemorea (L.) Grolle
Scapania undulata (L.) Dumort.

TRICHOCOLEACEAE
Trichocolea tomentella (Ehrh.) Dumort.

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BRYOPHYTA

AMBLYSTEGIACEAE
Amblystegium serpens (Hedw.) Schimp.
Amblystegium serpens var. *juratzkanum* (Schimp.) Rau & Herv.
Amblystegium varium (Hedw.) Lindb.
Calliergon cordifolium (Hedw.) Kindb.
Calliergon giganteum (Schimp.) Kindb.
Calliergon stramineum (Brid.) Kindb.
Calliergonella cuspidata (Hedw.) Loeske
Campylium hispidulum (Brid.) Mitt.
Campylium radicale (P. Beauv.) Grout
Campylium stellatum (Hedw.) C.E.O. Jensen
Drepanocladus aduncus (Hedw.) Warnst.
Hygroamblystegium fluviatile (Hedw.) Loeske
Hygroamblystegium tenax (Hedw.) Jenn.
Hygrohypnum eugyrium (Schimp.) Loeske
Hygrohypnum ochraceum (Turner ex Wilson) Loeske
Leptodictyum humile (P. Beauv.) Ochyra
Leptodictyum riparium (Hedw.) Warnst.
Platylomella lescurii (Sull.) Andrews
Scorpidium scorpioides (Hedw.) Limpr.
Warnstorfia exannulata (Schimp.) Loeske
Warnstorfia fluitans (Hedw.) Loeske

ANDREAEACEAE
Andreaea rothii F. Weber & D. Mohr

ANOMODONTACEAE
Anomodon attenuatus (Hedw.) Huebener
Anomodon rostratus (Hedw.) Schimp.
Anomodon rugelii (Müll. Hal.) Keissl.
Haplohymenium triste (Ces.) Kindb.

AULACOMNIACEAE
Aulacomnium heterostichum (Hedw.) Bruch & Schimp.
Aulacomnium palustre (Hedw.) Schwägr.

BARTRAMIACEAE
Bartramia pomiformis Hedw.
Philonotis fontana (Hedw.) Brid.
Plagiopus oederiana (Sw.) H.A. Crum & L.E. Anderson

BRACHYTHECIACEAE
Brachythecium acuminatum (Hedw.) Austin
Brachythecium acutum (Mitt.) Sull.
Brachythecium calcareum Kindb.
Brachythecium campestre (Müll. Hal.) Schimp.
Brachythecium oxycladon (Brid.) Jaeg. & Sauerb. var. *oxycladon*
Brachythecium plumosum (Hedw.) Schimp.
Brachythecium populeum (Hedw.) Schimp.
Brachythecium rivulare Schimp.
Brachythecium rutabulum (Hedw.) B.S.G.
Brachythecium salebrosum (F. Weber & D. Mohr) Schimp.
Brachythecium velutinum (Hedw.) Schimp.
Bryhnia novae-angliae (Sull. & Lesq.) Grout
Bryoandersonia illecebra (Hedw.) H. Rob.
Eurhynchium hians (Hedw.) Sande Lac.
Eurhynchium pulchellum (Hedw.) Jenn.
Homalotheciella subcapillata (Hedw.) Broth.
Platyhypnidium riparioides (Hedw.) Dix.
Pseudoscleropodium purum (Hedw.) Fleisch.
Rhynchostegium serrulatum (Hedw.) Jaeg. & Sauerb.

BRYACEAE
Bryum argenteum Hedw.
Bryum caespiticium Hedw.
Bryum capillare Hedw.
Bryum flaccidum Brid.
Bryum pseudotriquetrum (Hedw.) G. Gaertn., B. Mey. & Scherb.
Leptobryum pyriforme (Hedw.) Wilson
Pohlia annotina (Hedw.) Lindb.
Pohlia lescuriana (Sull.) Grout
Pohlia nutans (Hedw.) Lindb.
Pohlia wahlenbergii (F. Weber & D. Mohr) Andrews
Rhodobryum roseum (Hedw.) Limpr.

BRUCHIACEAE
Bruchia flexuosa (Sw. ex Schwägr.) Müll. Hal.
Trematodon ambiguus (Hedw.) Hornsch.

BUXBAUMIACEAE
Buxbaumia aphylla Hedw.
Diphyscium foliosum (Hedw.) D. Mohr

CALYMPERACEAE
Syrrhopodon incompletus Schwägr.
Syrrhopodon texanus Sull.

CLIMACIACEAE
Climacium americanum Brid.
Climacium dendroides (Hedw.) F. Weber & D. Mohr
Climacium kindbergii (Renauld & Cardot) Grout

DICRANACEAE
Dicranella cerviculata (Hedw.) Schimp.
Dicranella heteromalla (Hedw.) Schimp.
Dicranella rufescens (With.) Schimp.
Dicranum condensatum Hedw.
Dicranum flagellare Hedw.
Dicranum fulvum Hook.
Dicranum montanum Hedw.
Dicranum ontariense Peters.
Dicranum polysetum Sw.
Dicranum scoparium Hedw.
Dicranum spurium Hedw.
Dicranum undulatum Brid.
Rhabdoweisia crispata (With.) Lindb.

DITRICHACEAE
Ceratodon purpureus (Hedw.) Brid.
Ditrichum pallidum (Hedw.) Hampe
Ditrichum pusillum (Hedw.) Hampe
Pleuridium palustre (Bruch & Schimp.) Bruch & Schimp.
Pleuridium subulatum (Hedw.) Rabenh.

ENTODONTACEAE
Entodon cladorrhizans (Hedw.) Müll. Hal.
Entodon seductrix (Hedw.) Müll. Hal.

EPHEMERACEAE
Ephemerum crassinervum (Schwägr.) Hampe
Ephemerum serratum (Hedw.) Hampe
Ephemerum spinulosum Bruch & Schimp.

FABRONIACEAE
Anacamptodon splachnoides (Froel. ex Brid.) Brid.

FISSIDENTACEAE
Fissidens adianthoides Hedw.
Fissidens bryoides Hedw.
Fissidens bushii (Cardot & Thér.) Cardot & Thér.
Fissidens fontanus (B. Pyl.) Steud.
Fissidens osmundioides Hedw.
Fissidens taxifolius Hedw.

FONTINALACEAE
Dichelyma capillaceum (With.) Myrin
Dichelyma pallescens Schimp.
Fontinalis antipyretica Hedw.
Fontinalis dalecarlica Schimp.
Fontinalis novae-angliae Sull.
Fontinalis sullivantii Lindb.

FUNARIACEAE
Funaria hygrometrica Hedw. var. *hygrometrica*
Physcomitrium pyriforme (Hedw.) Hampe

GRIMMIACEAE
Grimmia pilifera P. Beauv.
Racomitrium aciculare (Hedw.) Brid.
Schistidium apocarpum (Hedw.) Bruch & Schimp.

HEDWIGIACEAE
Hedwigia ciliata (Hedw.) P. Beauv.

HELODIACEAE
Helodium paludosum (Sull.) Austin

HYLOCOMIACEAE
Hylocomiastrum umbratum (Hedw.) Fleisch.
Hylocomium splendens (Hedw.) Schimp.
Pleurozium schreberi (Brid.) Mitt.

HYPNACEAE
Callicladium haldanianum (Grev.) H.A. Crum
Ctenidium molluscum (Hedw.) Mitt.
Herzogiella striatella (Brid.) Z. Iwats.
Herzogiella turfacea (Lindb.) Z. Iwats.
Homomallium adnatum (Hedw.) Broth.
Hypnum cupressiforme Hedw.
Hypnum curvifolium Hedw.
Hypnum fertile Sendtn.
Hypnum imponens Hedw.
Hypnum lindbergii Mitt.
Hypnum pallescens (Hedw.) P. Beauv.
Hypnum pratense (Rabenh.) Koch ex Spruce
Isopterygium elegans (Brid.) Lindb.
Isopterygium tenerum (Sw.) Mitt.
Platydictya subtilis (Hedw.) H.A. Crum
Platygyrium repens (Brid.) B.S.G.
Ptilium crista-castrensis (Hedw.) De Not.
Taxiphyllum deplanatum
(Bruch & Schimp. ex Sull.) Fleisch.

LESKEACEAE
Bryohaplocladium microphyllum
(Hedw.) R. Watan. & Z. Iwats.
Bryohaplocladium virginianum
(Brid.) R. Watan. & Z. Iwats.
Leskea gracilescens Hedw.
Leskea obscura Hedw.
Leskea polycarpa Hedw.

LEUCOBRYACEAE
Leucobryum glaucum (Hedw.) Ångstr.

LEUCODONTACEAE
Leucodon julaceus (Hedw.) Sull.

MNIACEAE
Mnium hornum Hedw.
Plagiomnium ciliare (Müll. Hal.) T. Kop.
Plagiomnium cuspidatum (Hedw.) T. Kop.
Plagiomnium ellipticum (Brid.) T. Kop.
Rhizomnium punctatum (Hedw.) T. Kop.

NECKERACEAE
Neckera pennata Hedw.

ORTHOTRICHACEAE
Orthotrichum cupulatum Brid.
Orthotrichum ohioense Sull. & Lesq.
Orthotrichum pumilum Sw.
Orthotrichum pusillum Mitt.
Orthotrichum stellatum Brid.
Orthotrichum strangulatum P. Beauv.
Ulota crispa (Hedw.) Brid.
Ulota hutchinsiae (Sm.) Hammar

PLAGIOTHECIACEAE
Plagiothecium cavifolium (Brid.) Z. Iwats.
Plagiothecium denticulatum (Hedw.) Schimp.
Plagiothecium latebricola Schimp.

POLYTRICHACEAE
Atrichum angustatum (Brid.) Bruch & Schimp.
Atrichum crispum (James) Sull.
Atrichum undulatum (Hedw.) P. Beauv.
Polytrichum commune Hedw.
Polytrichum formosum Hedw.
Polytrichum ohioense Renauld & Cardot
Polytrichum juniperinum Hedw.
Polytrichum piliferum Hedw.
Pogonatum brachyphyllum (Michx.) P. Beauv.
Pogonatum pensilvanicum (Hedw.) P. Beauv.

POTTIACEAE
Astomum muhlenbergianum (Sw.) Grout
Barbula unguiculata Hedw.
Desmatodon obtusifolius (Schwägr.) Schimp.
Hymenostylium recurvirostre (Hedw.) Dix.
Phascum cuspidatum Hedw.
Pottia truncata (Hedw.) Fürnr.
Tortella fragilis (Hook. & Wilson) Limpr.
Tortella humilis (Hedw.) Jenn.
Tortula mucronifolia Schwägr.
Tortula pagorum (Milde) De Not.
Tortula papillosa Wilson
Weissia controversa Hedw.

PTYCHOMITRIACEAE
Ptychomitrium incurvum (Schwägr.) Spruce

SEMATOPHYLLACEAE
Brotherella recurvans (Michx.) Fleisch.
Sematophyllum adnatum (Michx.) E. Britton
Sematophyllum demissum (Wilson) Mitt.

SPHAGNACEAE
Sphagnum affine Renauld & Cardot
Sphagnum angermanicum Melin
Sphagnum angustifolium (C.E.O. Jensen ex
Russow) C.E.O. Jensen
Sphagnum austinii Sull.
Sphagnum compactum DC.
Sphagnum cuspidatum Ehrh. ex Hoffm.
Sphagnum fallax (Klinggr.) Klinggr.
Sphagnum fimbriatum Wilson
Sphagnum flavicomans (Cardot) Warnst.
Sphagnum flexuosum Dozy & Molk.
Sphagnum fuscum (Schimp.) Klinggr.
Sphagnum girgensohnii Russow
Sphagnum henryense Warnst.
Sphagnum lescurii Sull.
Sphagnum macrophyllum Brid.
Sphagnum magellanicum Brid.
Sphagnum molle Sull.
Sphagnum palustre L.
Sphagnum papillosum Lindb.
Sphagnum platyphyllum
(Lindb. ex Braithw.) Sull. ex Warnst.
Sphagnum portoricense Hampe
Sphagnum recurvum P.Beauv.
Sphagnum rubellum Wilson
Sphagnum russowii Warnst.
Sphagnum squarrosum Crome
Sphagnum strictum Sull.
Sphagnum subsecundum Nees
Sphagnum subtile (Russow) Warnst.
Sphagnum tenerum Sull. & Lesq.
Sphagnum teres (Schimp.) Ångstr.
Sphagnum torreyanum Sull.
Sphagnum trinitense Müll. Hal.

TETRAPHIDACEAE
Tetraphis pellucida Hedw.

THELIACEAE
Thelia asprella Sull.
Thelia hirtella (Hedw.) Sull.
Thelia lescurii Sull.

THUIDIACEAE
Haplocladium microphyllum (Hedw.) Broth.
Helodium paludulosum (Sull.) Austin
Rauiella scita (P. Beauv.) Reim.
Thuidium delicatulum (Hedw.) Schimp.
Thuidium recognitum (Hedw.) Lindb.

TIMMIACEAE
Timmia megapolitana Hedw.

Long Island Botanical Society
PO Box 507
Aquebogue, NY 11931

Upcoming Programs

January and February: No meeting!

March 9, 2010* Tuesday, 7:30 PM

Bill Titus: "Biology Today - Beyond Darwin" This talk will be about biology and evolution with a botanical slant. Bill is a retired Coordinator of Cornell Cooperative Extension in Nassau County. He has an interest in the natural sciences and, specifically, evolution and its evidence in our world today. He recently attended a shipboard/ cruise course entitled "Evolution Emanations" which consisted of about twenty-four hours of presentations by researchers working on evolution.

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

April 13, 2010* Tuesday, 7:30 PM

Meg McGrath: "Determining the Impact on Plants of Ground-level Ozone on Long Island." Dr. McGrath will talk about her work investigating the impact of ambient ozone on agricultural plants growing on Long Island. Each summer this ozone reaches concentrations which are high enough to require the issuance of health advisories for people. Meg is an Associate Professor with a research/extension appointment in the Department of Plant Pathology and Plant-Microbe Biology at Cornell University. She is stationed at the Long Island Horticultural Research and Extension Center where she has been working since 1988 on optimizing management of diseases affecting vegetable crops within organic as well as conventional production systems, and also on determining impact of ambient ozone on plant productivity.

Location: Museum of Long Island Natural Sciences, Earth and Space Science Building, Gil Hanson Room (Room 123), SUNY at Stony Brook, Stony Brook

* Refreshments and informal talk begin at 7:30 p.m.
Formal meeting starts at 8:00 p.m.
Directions to Muttontown or Stony Brook: 516-354-6506